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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/685,136

10/14/2003

Joseph B. Rowlands

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10/14/2008

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EXAMINER

NGUYEN, TANH Q

ART UNIT

PAPER NUMBER

2182

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DELIVERY MODE

10/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/685,136	Applicant(s) ROWLANDS, JOSEPH B.	
	Examiner TANH Q. NGUYEN	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2008 (RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6,7,10,12,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,7,10,12,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 18, 2008 has been entered.

Specification

2. The amendment to the specification filed July 18, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is discussed in the petition dismissal mailed to applicant on September 30, 2008.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

3. Claims 1, 6, 10, 15 are objected to because of the following informalities:

“couple” in line 25 of claim 1 should be replaced with --, the respective interfaces coupling-- for clarity

“the coherent fabric in the second node” in line 29 of claim 1 should be replaced

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with --a coherent fabric in the second node-- for clarity and for avoiding improper antecedent basis

“another agent” in line 3 of claim 6 should be replaced with --an agent-- because there is no previous recitation of agent

“conforms” in line 3 of claim 6 should be replaced with --conform-- for proper grammar

“the coherent fabric in the second node” in line 30 of claim 10 should be replaced with --a coherent fabric in the second node-- for clarity and for avoiding improper antecedent basis

“another agent” in line 3 of claim 15 should be replaced with --an agent-- because there is no previous recitation of agent

“conforms” in line 3 of claim 15 should be replaced with --conform-- for proper grammar

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6-7, 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites “wherein the access by the second bridge to a location of the memory and a subsequent access by another agent to access the location of the

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memory conforms to a producer-consumer protocol, wherein the second bridge corresponds to a producer and the another agent corresponds to a consumer of the producer-consumer protocol” in lines 1-5. Claim 7 recites “wherein data written by the second bridge to access the memory comprises a payload and a flag” in lines 1-3. Claims 15-16 recite limitations that are similar to those recited in claims 6-7. It is not clear what “**the access by the second bridge** to a location of the memory” refers to - as claim 1 and claim 10 individually suggests an access by the first bridge (last three lines of claim 1 and last nine lines in claim 10). It is further not clear what “**data written by the second bridge to access the memory**” means, as data are normally written to a memory instead of written to access a memory. Clarification is required.

6. The rejections that follow are based on the examiner’s best interpretation of the claims.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 3, 6-7, 10, 12, 15-16 are rejected under 35 U.S.C. 102(a) 35

U.S.C. 102(a) as being anticipated by Sano (US 2003/0105828).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

9. As per claim 1, Sano teaches a system (FIGs. 1-6) for managing coherent data access through multiple nodes (10A, 10B – FIG. 2), comprising:

a first data processing system (10A, FIG. 2) forming a first node, in which the first data processing system includes a first bridge (32 of 10A, FIG. 3) and a memory (24A - FIG. 2) local to the first node, wherein the memory stores cacheable data having coherency ([0071]); and

a second data processing system (10B, FIG. 2) forming a second node, in which the second data processing system includes a second bridge (32 of 10B, FIG. 3) and respective interfaces (308, FIG. 3), the respective interfaces coupling the first node to the second node, wherein when the second node receives a request from an external source (304, FIG. 2) to access a coherent fabric of the memory (Globally Coherent Memory, FIG. 2), the second bridge identifies the memory as located in a remote node and transfers the request as an uncacheable access request to the first node so that the uncacheable access request does not access the coherent fabric in the second node, and when the first bridge receives the uncacheable access request, the first bridge

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identifies the memory as a local access in the first node and processes the uncacheable access request from the second node as a coherent access to access the coherent fabric of the memory in the first node ([0070] teaches noncoherent remote access, last 2 lines of [0164] teaches uncacheable transaction being treated as noncoherent transaction, and paragraph [0071] teaches noncoherent remote access to cacheable memory space of first data processing system).

10. As per claims 3, 6-7, Sano teaches the request from the external source being a read request to access the memory (reading data from the cacheable coherent memory space of the first data processing system ([0085], lines 4-7; [0086], lines 1-5; [0095]));

the second bridge (32 of system 10B) producing the remote access (performing the remote uncacheable access), and an agent (agent 32 of system 10A) consuming the access, hence a producer-consumer protocol;

data written by the bridge comprising a payload (a packet) and a flag (e.g. WrInv; [0164]).

11. As per claims 10, 12, 15-16, the claims generally correspond to claims 1, 3, 6, 7, and are rejected on the same bases.

12. Claims 1, 3, 6-7, 10, 12, 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Keller et al. (US 6,714,994).

13. As per claim 1, Keller teaches a system (14, FIG. 1) for managing coherent data access through multiple nodes (16A-16D, FIG. 1), comprising:

a first data processing system forming a first node (16A, 16B, 16D – FIG. 1; 16B, 16D – FIG. 2), in which the first data processing system includes a first bridge (PPL 34,

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HB 28 – FIG. 2; col. 7, lines 18-21) and a memory (20A, 20B, 20D – FIG. 1) local to the first node, wherein the memory stores cacheable data having coherency (col. 8, lines 2-8; col. 11, lines 8-26; col. 11, lines 52-56); and

a second data processing system forming a second node (16C – FIG. 1; 16C – FIG. 2), in which the second data processing system includes a second bridge (PPL 34, HB 28 – FIG. 2; col. 6, lines 55-57; col. 6, lines 65-67) and respective interfaces (18B, 18C, 30A, 30B – FIG. 2), the respective interfaces coupling the first node to the second node, wherein when the second node receives a request from an external source (24A-24C, FIG. 1; 24A, FIG. 2) to access a coherent fabric of the memory (to access either memory 20A, 20B, or 20C – FIG. 1 which is coherent (col. 8, lines 2-8)), the second bridge identifies the memory as located in a remote node and transfers the request as an uncacheable access request to the first node (col. 7, lines 27-31; col. 11, lines 11-13; col. 11, lines 54-56) so that the uncacheable access request does not access the coherent fabric in the second node (col. 7, lines 27-31), and when the first bridge receives the uncacheable access request, the first bridge identifies the memory as a local access in the first node and processes the uncacheable access request from the second node as a coherent access to access the coherent fabric of the memory in the first node (col. 8, lines 52-67; col. 16, line 60-col. 18, line 36).

14. As per claims 3, 6-7, Keller teaches the request from the external source being a read or a write request to access the memory (col. 11, lines 8-26; col. 11, lines 52-56);

the second bridge generating a request to access the memory, and an agent of the first node (i.e. the first bridge) consuming the request - hence a producer-consumer

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protocol;

data written by the second bridge comprising a payload and a flag (col. 10, lines 45-52).

15. As per claims 10, 12, 15-16, the claims generally correspond to claims 1, 3, 6, 7, and are rejected on the same bases.

Examiner's note: *Examiner has cited particular page, column and line number(s) in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. Applicant needs to consider the references in their entirety as potentially teaching all or part of the claimed invention.*

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and verification of the metes and bounds of the claimed invention.

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 1, 3, 6-7, 10, 12, 15-17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-8 of U.S. Patent No. 7,206,879. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 3-8 of U.S. Patent No. 7,206,879 either anticipate or make obvious the claims of the current application. Note that paragraph [164] teaches uncacheable transactions being treated as non-coherent transactions.

Response to Arguments

18. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection and in view of the petition dismissal mailed to applicant on September 30, 2008.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANH Q. NGUYEN whose telephone number is (571)272-4154. The examiner can normally be reached on M-F (9:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TARIQ HAFIZ can be reached on (571)272-6729. The fax phone number

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for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TANH Q. NGUYEN/
Primary Examiner, Art Unit 2182

TQN: October 9, 2008